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L10: Entry 2 of 3

File: JPAB

Nov 19, 2002

PUB-NO: JP02002331238A

DOCUMENT-IDENTIFIER: JP 2002331238 A

TITLE: COMPOSITE OXIDE, METHOD FOR MANUFACTURING THE SAME, EXHAUST GAS CLEANING
CATALYST AND METHOD FOR MANUFACTURING THE SAME

PUBN-DATE: November 19, 2002

INVENTOR-INFORMATION:

NAME

COUNTRY

MORIKAWA, AKIRA

HATANAKA, YOSHIO

IMAGAWA, HARUO

SUDA, AKIHIKO

TAKAHASHI, NAOKI

ASSIGNEE-INFORMATION:

NAME

COUNTRY

TOYOTA CENTRAL RES & DEV LAB INC

APPL-NO: JP2001164444

APPL-DATE: May 31, 2001

PRIORITY-DATA: 2000227183 (July 27, 2000), 2000379295 (December 13, 2000),
2000394738 (December 26, 2000), 2001061422 (March 6, 2001)INT-CL (IPC): B01 J 23/10; B01 D 53/94; B01 J 21/06; B01 J 23/46; B01 J 23/56; B01 J
23/63; B01 J 29/44; B01 J 32/00; B01 J 35/08; B01 J 37/03; F01 N 3/10

ABSTRACT:

PROBLEM TO BE SOLVED: To provide a composite oxide maximally developing the characteristics of respective metal elements constituting the composite oxide and useful as a carrier of an exhaust gas cleaning catalyst.

SOLUTION: More than one kinds of aqueous solutions of acid salts of metals are prepared and a plurality of acid salts are successively added to an alkali aqueous solution capable of neutralizing all of the acid salts to form a precipitate which is, in turn, baked to manufacture the composite oxide wherein an oxide or solid solution comprising, for example, Al

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L8: Entry 1 of 1

File: DWPI

Nov 19, 2002

DERWENT-ACC-NO: 2002-165986
DERWENT-WEEK: 200306
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TITLE: Composite oxide used as support for catalyst, used in purifying exhaust gas, includes agglomerated particles comprising metallic element oxides

INVENTOR: HATANAKA, M; IMAGAWA, H ; MORIKAWA, A ; SUDA, A ; TAKAHASHI, N

PATENT-ASSIGNEE:

ASSIGNEE

CODE

TOYOTA CHUO KENKYUSHO KK

TOYW

PRIORITY-DATA: 2001JP-0164444 (May 31, 2001), 2000JP-0227183 (July 27, 2000),
2000JP-0379295 (December 13, 2000), 2000JP-0394738 (December 26, 2000),
2001JP-0061422 (March 6, 2001)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2002331238 A	November 19, 2002		036	B01J023/10
EP 1175935 A2	January 30, 2002	E	058	B01D053/94
US 20020049137 A1	April 25, 2002		000	B01J023/10

DESIGNATED-STATES: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI TR

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP2002331238A	May 31, 2001	2001JP-0164444	
EP 1175935A2	July 24, 2001	2001EP-0117621	
US20020049137A1	July 25, 2001	<u>2001US-0911489</u>	

INT-CL (IPC): B01 D 53/94; B01 J 21/06; B01 J 23/10; B01 J 23/46; B01 J 23/56; B01 J 23/63; B01 J 29/44; B01 J 32/00; B01 J 35/02; B01 J 35/08; B01 J 37/03; C01 G 1/02; F01 N 3/10

ABSTRACTED-PUB-NO: EP 1175935A
BASIC-ABSTRACT:

NOVELTY - A composite oxide comprises agglomerated particles having an average particle diameter of at most 20 microns m and comprising metallic element oxides which are in form of fine particles having an average diameter of at most 50 nm. The agglomerated particles have a surface and an inner portion whose metallic element distributions differ with each other.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(A) a catalyst for purifying an exhaust gas comprising a support substrate, and catalytic layers formed on the substrate surface and composed of supports including

the inventive oxides and a catalytic ingredient loaded on the first support;

(B) the production of a composite oxide comprising adding aqueous solutions of metallic salts successively to an alkaline aqueous solution, and calcining the precipitates; and

(C) the production of a catalyst for purifying exhaust gas.

USE - As a support for a catalyst for purifying an exhaust gas.

ADVANTAGE - The invention has an enhanced heat resistance and exhibits the characteristics of metallic elements maximally at the same time. The catalyst using the composite oxide exhibits the activities which degrade less even after subjecting to a severe durability, is good in terms of the heat and sulfur-poisoning resistance, and can efficiently purify the harmful components in exhaust gases.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic explanatory diagram illustrating a constitution of a composite oxide.

ABSTRACTED-PUB-NO:

US20020049137A

EQUIVALENT-ABSTRACTS:

NOVELTY - A composite oxide comprises agglomerated particles having an average particle diameter of at most 20 microns m and comprising metallic element oxides which are in form of fine particles having an average diameter of at most 50 nm. The agglomerated particles have a surface and an inner portion whose metallic element distributions differ with each other.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(A) a catalyst for purifying an exhaust gas comprising a support substrate, and catalytic layers formed on the substrate surface and composed of supports including the inventive oxides and a catalytic ingredient loaded on the first support;

(B) the production of a composite oxide comprising adding aqueous solutions of metallic salts successively to an alkaline aqueous solution, and calcining the precipitates; and

(C) the production of a catalyst for purifying exhaust gas.

USE - As a support for a catalyst for purifying an exhaust gas.

ADVANTAGE - The invention has an enhanced heat resistance and exhibits the characteristics of metallic elements maximally at the same time. The catalyst using the composite oxide exhibits the activities which degrade less even after subjecting to a severe durability, is good in terms of the heat and sulfur-poisoning resistance, and can efficiently purify the harmful components in exhaust gases.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic explanatory diagram illustrating a constitution of a composite oxide.

CHOSEN-DRAWING: Dwg.1/4

TITLE-TERMS: COMPOSITE OXIDE SUPPORT CATALYST PURIFICATION EXHAUST GAS AGGLOMERATE PARTICLE COMPRISE METALLIC ELEMENT

DERWENT-CLASS: E36 H06 J01 J04 Q51

CPI-CODES: E10-J02D; E11-Q02; E31-F01A; E31-H01; E31-N05B; E34-B04; E34-C03; E34-E; E35-K04; E35-L; H06-C03; J01-E02D; J04-E03; N01-B; N01-C02; N01-D02; N02-E02; N02-F02; N03-A; N03-B01; N03-B02; N06-F; N07-L02;

CHEMICAL-CODES:

Chemical Indexing M3 *01*

Fragmentation Code

C107 C108 C307 C520 C730 C800 C801 C802 C803 C804
C807 M411 M750 M904 M905 M910 N163 N441 Q431 Q436
Q439

Specific Compounds

01881K 01881X

Registry Numbers

1881U

Chemical Indexing M3 *02*

Fragmentation Code

C108 C307 C520 C730 C800 C801 C802 C803 C804 C807
M411 M750 M904 M905 M910 N163 N441 Q431 Q436 Q439

Specific Compounds

01902K 01902X

Registry Numbers

1902U

Chemical Indexing M3 *03*

Fragmentation Code

C107 C108 C520 C730 C800 C801 C802 C803 C804 C807
M411 M750 M904 M905 N163 N441 Q431 Q436 Q439

Specific Compounds

01901K 01901X

Registry Numbers

1901U

Chemical Indexing M3 *04*

Fragmentation Code

C108 C316 C540 C730 C800 C801 C802 C803 C804 C805
M411 M750 M904 M905 M910 N163 N441 Q431 Q436 Q439

Specific Compounds

01675K 01675X

Registry Numbers

1675U

Chemical Indexing M3 *05*

Fragmentation Code

C108 C216 C540 C730 C800 C801 C802 C803 C804 C805
M411 M750 M904 M905 M910 N163 N441 Q431 Q436 Q439

Specific Compounds

01674K 01674X

Registry Numbers

1674U

Chemical Indexing M3 *06*

Fragmentation Code

C106 C108 C550 C730 C800 C801 C802 C803 C805 C807
M411 M750 M904 M905 M910 N163 N441 Q431 Q436 Q439

Specific Compounds

01423K 01423X

Registry Numbers

1423U

Chemical Indexing M3 *07*

Fragmentation Code

M210 M211 M212 M213 M214 M215 M216 M220 M221 M222
M223 M224 M225 M226 M231 M232 M233 M320 M416 M610
M620 M750 M904 M905 N163 N441 Q431 Q436 Q439

Markush Compounds

200058-48705-K 200058-48705-X

Chemical Indexing M3 *08*

Fragmentation Code

A678 C810 M411 M730 M904 M905 N163 Q421 Q431 Q436
Q439

Specific Compounds

03247K 03247C

Chemical Indexing M3 *09*

Fragmentation Code

A545 C810 M411 M730 M904 M905 N163 Q421 Q431 Q436
Q439

Specific Compounds

06899K 06899C

Chemical Indexing M3 *10*

Fragmentation Code

A212 A313 A422 A539 A540 A758 A759 A940 B114 B701
B712 B720 B831 C108 C802 C803 C804 C805 C807 M411
M720 M781 M904 M905 N411 N425 N514 N515 Q423 Q431
Q436 Q439 R032

Markush Compounds

200058-48704-K 200058-48704-P 200058-48704-U

Chemical Indexing M3 *11*

Fragmentation Code

A540 A657 A758 A940 C108 C730 C801 C802 C803 C804
C805 C807 M411 M720 M781 M904 M905 N411 N425 N514
N515 Q423 Q431 Q436 Q439 R032

Markush Compounds

200058-48703-K 200058-48703-P 200058-48703-U

Chemical Indexing M3 *12*

Fragmentation Code

A540 A758 A940 C108 C730 C801 C802 C803 C804 C805
C807 M411 M720 M781 M904 M905 N411 N425 N514 N515
Q423 Q431 Q436 Q439 R032

Markush Compounds

200058-48702-K 200058-48702-P 200058-48702-U

Chemical Indexing M3 *13*

Fragmentation Code

A313 A657 A940 C108 C730 C801 C802 C803 C804 C805
C807 M411 M720 M781 M904 M905 N411 N425 N514 N515
Q423 Q431 Q436 Q439 R032

Markush Compounds

200058-48701-K 200058-48701-P 200058-48701-U

Chemical Indexing M3 *14*

Fragmentation Code

A657 A940 A960 A970 C710 C730 M411 M417 M730 M904
M905

Specific Compounds

18033K 18033S

Chemical Indexing M3 *15*

Fragmentation Code

A540 A940 A960 C710 C730 M411 M417 M730 M904 M905

Specific Compounds

20698K 20698S

Chemical Indexing M3 *16*

Fragmentation Code

A758 A940 C108 C307 C510 C730 C801 C802 C803 C804
C807 M411 M730 M904 M905

Specific Compounds

11544K 11544S

Chemical Indexing M3 *17*

Fragmentation Code

A313 A940 C108 C307 C510 C730 C801 C802 C803 C804

C807 M411 M730 M904 M905 M910

Specific Compounds

01967K 01967S

Registry Numbers

1967S 1967U

UNLINKED-DERWENT-REGISTRY-NUMBERS: 1423U; 1674U ; 1675U ; 1881U ; 1901U ; 1902U ;
1967S ; 1967U

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2002-051374